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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
SMITH, JOSHUA Y	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,681	ENCISO ET AL.	
	Examiner	Art Unit	
	Joshua Smith	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 4, 12, 14, 15, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry et al. (Patent No.: US 6,175,552 B1) in view of Gupta et al. (Patent Number: 5,864,542), hereafter referred to as Parry and Gupta, respectively.

As for Claim 1, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as "a first gateway network element to terminate a synchronous data transmission ring" in the instant invention).

Parry shows in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as "a

second gateway network element to terminate an additional synchronous data transmission ring" in the instant invention).

Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as "a central switching core to directly interconnect the first and second gateway network elements" in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) (management element) disposed at the switch. Parry also shows in lines 9-17, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and instructs the remote switches (see items 12) (gateway network elements) that also control ring configurations to reconfigure appropriately (substantively the same as "a management element (master multiplexer) to interconnect the first and second gateway network elements (remote switches) with a central management system (network management system)" and "a management element (master multiplexer) to ... communicate with the first and second gateway network elements (remote switches) and the central management system (network management system)" and "a central management system (network management system) to provide management signals to ... the synchronous data transmission rings (gateway network elements that control ring configurations)" in the instant invention). Parry fails to teach natively communicating

with network elements in their respective protocols, and a system that directs traffic flow. Gupta teaches these limitations.

In the same field of endeavor, Gupta teaches in lines 27-39, column 6, a component that directs traffic between two busses (a system that directs traffic flow).

Gupta also teaches in lines 27-39, column 7, CPM control unit that that provides translation to enable seamless integration of different protocols throughout a system (natively communicating with network elements in their respective protocols). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gupta with the invention of Parry since Gupta provides a system where different protocols in a system can communicate and are managed effectively, allowing the network of Parry to support different applications and services and to provide them to customers.

As for Claim 3, the references as applied to Claim 1 teaches all the limitations except a SDH ring. Parry further teaches in lines 20-21, column 3, of a SDH network layout comprising a number of rings (substantively the same as "a Synchronous Digital Hierarchy (SDH) ring" in the instant invention).

As for Claim 4, the references as applied to Claim 1 teaches all the limitations except a SONET ring. Parry further teaches in lines 20-21, column 3, of a SONET network layout comprising a number of rings (substantively the same as "a Synchronous Optical Network (SONET) ring" in the instant invention).

As for Claim 12, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as "terminating ... synchronous data transmission ring on associated gateway network elements" in the instant invention).

Parry shows in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as "multiple synchronous data transmission ring" in the instant invention).

Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as "directly interconnecting the gateway network element through a central switching core" in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to reconfigure appropriately" (substantively the same as "interconnecting the gateway network elements to a central management system with a local management element" in the instant invention). Parry fails to teach natively communicating with network

elements in their respective protocols, and a system that directs traffic flow. Gupta teaches these limitations.

In the same field of endeavor, Gupta teaches in lines 27-39, column 6, a component that directs traffic between two busses (a system that directs traffic flow).

Gupta also teaches in lines 27-39, column 7, CPM control unit that that provides translation to enable seamless integration of different protocols throughout a system (communicating with network elements in their respective protocols). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gupta with the invention of Parry since Gupta provides a system where different protocols in a system can communicate and are managed effectively, allowing the network of Parry to support different applications and services and to provide them to customers.

As for Claim 14, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as "terminating the synchronous data transmission rings" in the instant invention). As discussed above with respect to Claim 3, Parry further teaches in lines 20-21, column 3, of a SDH network layout comprising a number of rings (substantively the same as "a Synchronous Digital Hierarchy (SDH) ring" in the instant invention).

As for Claim 15, Parry as applied to Claim 14 teaches the limitation "terminating the synchronous data transmission rings". As discussed above with respect to Claim 4, Parry further teaches in lines 20-21, column 3, of a SONET network layout comprising a number of rings (substantively the same as "a Synchronous Optical Network (SONET) ring" in the instant invention).

As for Claim 22, Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as "a central switching core to directly interconnect" in the instant invention).

Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports, and, in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as "a synchronous data transmission ring terminated on a first gateway network element with an additional synchronous data transmission ring terminated on a second gateway network element" in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to

reconfigure appropriately" (substantively the same as "a local management element to interconnect the integrated switch with a central management system" in the instant invention). Parry fails to teach natively communicating with network elements in their respective protocols, and a system that directs traffic flow. Gupta teaches these limitations.

In the same field of endeavor, Gupta teaches in lines 27-39, column 6, a component that directs traffic between two busses (a system that directs traffic flow).

Gupta also teaches in lines 27-39, column 7, CPM control unit that that provides translation to enable seamless integration of different protocols throughout a system (natively communicating with network elements in their respective protocols). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gupta with the invention of Parry since Gupta provides a system where different protocols in a system can communicate and are managed effectively, allowing the network of Parry to support different applications and services and to provide them to customers.

As for Claim 30, Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as "directly interconnecting" in the instant invention).

Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports, and, in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an

arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as "a synchronous data transmission ring terminated on a first gateway network element" and "an additional synchronous data transmission ring terminated on a second gateway network element" in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to reconfigure appropriately" (substantively the same as "maintaining a gateway management communication channel between a central management system and the first and second gateway network elements" in the instant invention). Parry fails to teach natively communicating with network elements in their respective protocols, and a system that directs traffic flow. Gupta teaches these limitations.

In the same field of endeavor, Gupta teaches in lines 27-39, column 6, a component that directs traffic between two busses (a system that directs traffic flow).

Gupta also teaches in lines 27-39, column 7, CPM control unit that that provides translation to enable seamless integration of different protocols throughout a system (natively communicating with network elements in their respective protocols). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gupta with the invention of Parry since Gupta provides a

system where different protocols in a system can communicate and are managed effectively, allowing the network of Parry to support different applications and services and to provide them to customers.

Claims 2, 13, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, and further in view of Douglas (Patent Number: 5,097,469), hereafter referred to as Douglas.

As for Claims 2, 23 and 31, the references as applied to Claims 1, 22 and 30 teaches all the limitations except network elements manufactured by different vendors. However, in the same field of endeavor, Douglas teaches in lines 50-51, column 2, that a data communications network may have equipment manufactured by different suppliers (substantively the same as "network elements manufactured by different vendors" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the passive monitor of Douglas into the disaster recovery system of Parry since passive monitoring of traffic can provide information to aid in rerouting data traffic efficiently in the event of a switch failure and to monitor the health of the network after such a failure without introducing probe packets or similar traffic into the network.

As for Claim 13, as discussed above with respect to Claim 1, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports

(substantively the same as "terminating the synchronous data transmission rings comprises terminating the synchronous transmission rings with network elements" in the instant invention).

Parry does not teach network elements manufactured by different vendors. However, as discussed above with respect to Claim 2, Douglas teaches in lines 50-51 that a data communications network may have equipment manufactured by different suppliers (substantively the same as "network elements manufactured by different vendors " in the instant invention). The motivation to combine the invention of Douglas with the invention of Parry is discussed above with respect to Claim 2.

Claims 5, 6, 16, 17, 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, and further in view of Chen et al. (Patent No.: US 7,130,276 B2), hereafter referred to as Chen.

As for Claim 5, Parry as applied to Claim 1 teaches all the limitations except for a packet-based switching fabric overlaid with a synchronous frame structure. However, in the same field of endeavor, Chen teaches in lines 39-40, column 2, of a "switching fabric of a network switch", and, in lines 40-43, column 3, and in FIG. 1, Sheet 1 of 11, Chen shows a cell/packet switching engine (see item 140) providing switching at the cell/packet level, and its resulting data is sent to the ATM/POS framer (see item 150) for framing in the appropriate format (substantively the same as "the central switching core includes a packet-based switching fabric overlaid with a synchronous frame structure" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the network switch of Chen into the telecommunications network of Parry since the network switch works with synchronous technology and allows switching of not only SONET and TDM data, but also ATM and IP data, increasing the flexibility and capabilities of the telecommunications network.

As for Claims 6, 24 and 32, Parry shows in lines 19-26, column 3, and FIG. 1, Sheet 1 of 7, that the rings of the arrangement are interconnected via the switch (item 12), and the switch forms network node which is coupled to further network switches to transport traffic between nodes, where this will cause traffic from individual rings to be funneled to other rings and nodes, causing traffic from each individual ring to be a tributary when combined with traffic from other individual rings (substantively the same as "the central switching core comprises a switching platform to switch a traffic stream tributary across the one and the additional synchronous data transmission rings" in the instant invention).

As for Claims 16 and 17, Parry as applied to Claim 12 teaches all the limitations except for a packet-based switching fabric overlaid with a synchronous frame structure. However, in the same field of endeavor, Chen teaches in lines 39-40, column 2, of a "switching fabric of a network switch", and, in lines 40-43, column 3, and in FIG. 1, Sheet 1 of 11, Chen shows a cell/packet switching engine (see item 140) providing switching at the cell/packet level, and its resulting data is sent to the ATM/POS framer

(see item 150) for framing in the appropriate format (substantively the same as "the central switching core includes a packet-based switching fabric overlaid with a synchronous frame structure" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the network switch of Chen into the telecommunications network of Parry since the network switch works with synchronous technology and allows switching of not only SONET and TDM data, but also ATM and IP data, increasing the flexibility and capabilities of the telecommunications network.

Claims 7 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, Chen, and further in view of Roy et al. (Patent No.: US 6,631,130 B1), hereafter referred to as Roy.

As for Claims 7 and 25, the references as applied to Claims 1 and 5 teach all the limitations except for a PDU traffic stream termination card comprising a gateway element, a TDM termination card comprising the other gateway element, or a switch that switches both stream types. However, in the same field of endeavor, Roy teaches in lines 65-67, column 2, and lines 1-3, column 3, a network switch that has at least one interface for TDM traffic and at least one interface for ATM and packet traffic, implicitly teaching that the network switch can be connected to a TDM network device and an IP network device (where the PDUs of IP are packets), and the network switch can switch both types of traffic (substantively the same as "the first gateway network element comprises a Protocol Data Unit (PDU) traffic stream termination card and the second

gateway network element comprises a Time-Division Multiplex (TDM) traffic stream termination card, and the central switching core switches both streams" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the switch of Roy into the network of Parry and Chen since the switch has interfaces for both SONET and ATM/packet traffic, and such capabilities will allow the switch to connect to ATM, packet, and TDM devices and networks, allowing the network to be scalable with these other technologies and accept these traffic types.

Claims 8, 18, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, and further in view of Heuer et al. (Patent No.: US 6,717,953 B1), hereafter referred to as Heuer.

As for Claims 8, 18 and 26, the references as applied to Claims 1, 12 and 22 teach all the limitations except a network element that employs a management communication channel that is incompatible with the central management system. However, in the same field of endeavor, Heuer shows in FIG. 1, Sheet 1 of 3, an SDH system (item 11) connected with a SONET system (item 13). Lines 19-24, 49, 65-67, column 4, of Heuer teach that the SDH management system (see item 28, FIG. 1, Sheet 1 of 3) can manage both the SDH and SONET rings concurrently, but that the SONET signals of the SONET ring must be converted since SONET signals are not usable by the SDH management system (substantively the same as "least one of the first and the second gateway network elements employing a management

communication channel that is incompatible with the central management system" in the instant invention).

Heuer teaches in lines 45-47, column 4, and in FIG. 2, Sheet 1 of 3, the conversion must be performed in either multiplexer (see items 28 and 29) (substantively the same as "the management element interconnects the first and the second gateway network elements to the central management system " in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the facility of Heuer into the network of Parry since the conversion of SONET signals into an SDH signals will allow SONET networks to be connected to a SDH network of Parry and be managed by the SDH network management system and participate in the disaster recovery.

As for Claim 33, the references as applied to Claims 8 and 12 teach all the limitations except for natively supporting of the incompatible management channels. Heuer further teaches in lines 56-61, column 3, and FIG. 1, Sheet 1 of 3, that SDH and SONET systems can be connected by a STM-1 link, and, despite differences that make them incompatible and require conversion for management purposes (see Heuer, lines 19-24, column 4), the frame formats of the two systems are identical and both can operate on the STM-1 link (substantively the same as "natively supporting multiple incompatible management communication channels" in the instant invention). The motivation to combine the invention of Heuer with the invention of Parry is discussed above with respect to Claim 8.

Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, Heuer, and further in view of Houston et al. (Patent No.: US 6,778,541 B2), hereafter referred to as Houston.

As for Claim 9, the references as applied to Claim 8 teach all the limitations except for where one network element employs an IP stack and a second network element employs an OSI stack. However, in the same field of endeavor, Houston shows in Fig. 1, Sheet 1 of 9, an IP router (see item 24) which employs an IP stack like that shown as item IP STACK 34, Fig. 3, Sheet 3 of 9 (substantively the same as "the first gateway network element employs an Internet Protocol (IP) stack" in the instant invention).

Houston also shows in Fig. 1, Sheet 1 of 9, an network element item 12, that employs an OSI stack like that shown as item OSI STACK 32, Fig. 3, Sheet 3 of 9 (substantively the same as "the second gateway network element employs an an Open System Interconnection (OSI) stack in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the network element of Houston into the network of Parry and Heuer since Houston provides tunneling between SDH and IP networks, allowing the network of Parry to accept data from outside IP networks.

As for Claim 19, the references as applied to Claims 8 and 12 teach all the limitations except an IP network element and an OSI management system. However, in

the same field of endeavor, Houston shows in Fig. 1, Sheet 1 of 9, an IP router (see item 24) which employs an IP stack like that shown as item IP STACK 34, Fig. 3, Sheet 3 of 9 (substantively the same as "a network element that employs an Internet Protocol (IP) stack" in the instant invention).

Houston also shows in Fig. 1, Sheet 1 of 9, a SDH/SONET network item 20 that employs OSI connections and employs an OSI stack like that shown as item OSI STACK 32, Fig. 3, Sheet 3 of 9 (substantively the same as "supports an Open System Interconnection (OSI) stack and not the IP stack" in the instant invention). The motivation to combine the invention of Houston with the invention of Parry and Heuer is discussed above with respect to Claim 9.

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, Heuer, and further in view of Doidge et al. (Patent Number: 6,064,674), hereafter referred to as Doidge.

As for Claim 10, the references as applied to Claim 8 teach all the limitations except for incompatible applications of OSI stacks. However, in the same field of endeavor, Doidge shows in FIG. 2, Sheet 2 of 12, a LAN switch (item 20) connected to a network of ATM devices, where, in lines 65-67, column 7, "incompatible OSI layers 2 and 3 protocols of the LAN frames and the ATM network" (substantively the same as "the applications of the OSI stacks between the first and second gateway network elements are incompatible" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the apparatus of Doidge into the network of Parry and Heuer since the apparatus allows the converting of different protocols efficiently through hardware and without requiring intervention by a microprocessor, allowing the network to efficiently accept data from protocols other than its own.

As for Claim 20, the references as applied to Claims 8 and 12 teach all the limitations except incompatible applications of the OSI stack. However, in the same field of endeavor, Doidge shows in FIG. 2, Sheet 2 of 12, a LAN switch (item 20) connected to a network of ATM devices, where, in lines 65-67, column 7, "incompatible OSI layers 2 and 3 protocols of the LAN frames and the ATM network" (substantively the same as "... employs a different, incompatible application of the OSI stack than an application of the OSI stack supported by the ..." in the instant invention). The motivation to combine the invention of Doidge with the invention of Parry is discussed above with respect to Claim 10.

Claims 11, 21, 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, and further in view of Nakatsugawa (Patent No.: US 6,747,982 B2), hereafter referred to as Nakatsugawa.

As for Claims 11, 21, 29 and 36, Parry as applied to Claims 1, 12, 22 and 30 teaches all the limitations except for an interface to the central switching to locally drop traffic from a tributary on a synchronous data transmission ring terminated on a first

gateway network element. However, in the same field of endeavor, Nakatsugawa shows in lines 2-9, FIG. 4, Sheet 4 of 6, that a single gateway (see item 11, FIG. 1, Sheet 1 of 6) can have two separate function blocks (see items 63 and 65, FIG. 4, Sheet 4 of 6), and when function block item 63 receives data from its respective LAN (see item 3, FIG. 4) that does not have a destination on its respective LAN, it sends the data through route 23 within the gateway to function block item 64 for processing (substantively the same as "an interface to interconnect with the central switching core to locally drop traffic from a tributary on a synchronous data transmission ring terminated on the first gateway network element" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the method of Nakatsugawa into the network of Parry since Nakatsugawa provides an efficient routing method and gateway for a loop network.

Claims 27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Gupta, Heuer, and further in view of Hunneyball (Pub. No.: US 2004/0136389 A1), hereafter referred to as Hunneyball.

As for Claims 27 and 34, the references as applied to Claims 8 and 33 teach all the limitations except for mutually incompatible IP and OSI management channels running over DCC. However, in the same field of endeavor, Hunneyball teaches in the abstract of OSI protocols running over a network of embedded Data Communications Channels and of MPLS/IP protocols running over a network of embedded Data Communication Channels (substantively the same as "management channels include

Internet Protocol (IP) over Data Communication Channel (DCC) and Open System Interconnection (OSI) over DCC" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to combine aspects of the network of Hunneyball into the network of Parry and Heuer since Hunneyball provides a management system that allows MPLS enabled network devices to be managed on SDH ring networks.

Claims 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer, Doidge, and Hunneyball.

As for Claims 28 and 35, the references as applied to Claims 10 and 33 teach all the limitations except for mutually incompatible IP and OSI management channels running over DCC. However, in the same field of endeavor, Hunneyball teaches in the abstract of OSI protocols running over a network of embedded Data Communications Channels and of MPLS/IP protocols running over a network of embedded Data Communication Channels (substantively the same as "management channels include Internet Protocol (IP) over Data Communication Channel (DCC) and Open System Interconnection (OSI) over DCC" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to combine aspects of the network of Hunneyball into the network of Parry and Heuer since Hunneyball provides a management system that allows MPLS enabled network devices to be managed on SDH ring networks.

Response to Arguments

I. Arguments for rejections made under ***35 USC § 102.***

Applicant's arguments with respect to Claims 1, 3, 4, 15, 22 and 30 have been considered but are moot in view of the new ground(s) of rejection.

Applicants submit that Office Action appears to disregard the preamble of Claims 1 and 12, which recite "a switching module", and the preamble of Claims 22 and 30, which recite "integrated switch", and the claims are rejected under a reference that is not applicable when considered in light of claims as a whole. Examiner respectfully disagrees, as for the preambles of Claims 1 and 12, the Parry reference does include a switch in the system of Parry, clearly showing the system is involved in switching since the system comprises a switch, and this switch in the system of Parry is recited in the rejection of Claim 1, discussed above. As for the preambles of Claims 22 and 30, Parry teaches in column 3, lines 64-65, a switch being repaired or replaced, implicitly teaching that a switch is implemented with hardware components, and hardware switching components may include integrated switching components, and, in column 3, lines 37-40, and in FIG. 2, Sheet 2 of 7, a multiplexer (item 21a) is disposed at a switch (item 12), implicitly teaching that this and every other multiplexer that routes traffic in the system may contain hardware components.

Applicants also submit applicants are unable to understand how the recitation of random multiplexing elements of a network ring are purported to disclose or suggest elements of a switching module that are to terminate synchronous data transmission

rings and that Parry does not disclose a network elements to terminate synchronous data transmission rings. Examiner respectfully disagrees, as Parry teaches in column 4, lines 57-65, and in FIG. 5, Sheet 5 of 7, a disaster recovery interface point where inputs (item 24) terminate on an optical distribution frame (item 51) and from there can be patched to a multiplexer (item 52) for transport elsewhere, and Parry does not teach that a cabinet (item 210, FIG. 2, Sheet 2 of 7) containing a multiplexer (item 21, FIG. 2, Sheet 2 of 7) does not contain a similar optical distribution frame so that optical links terminate for the multiplexer, and, as a result, Parry implicitly teaches that optical links terminate at the multiplexers.

Applicants also submit that Parry does not teach a first and a second gateway network element, where a gateway network element is associated with terminating a ring on a switching system, such as at a central office or other switching center. Examiner respectfully disagrees, as a gateway network element is not always associated with terminating a ring on a switching system, such as at a central office or other switching center, and could be associated with other implementations, such as a routing element connecting networks with different routing protocols, where one or more network may even be a type of ring network. Despite this, the multiplexer of Parry is substantively the same as a gateway network element terminating a ring on a switching system, such as at a central office or other switching center, as Parry teaches in column 5, lines 9-24, and in FIG. 6, Sheet 6 of 7, each master multiplexer (items 21) connects to a network management system (items 62).

Applicants also submit that the switch (item 12) of Parry does not "directly interconnects" gateway network elements. Examiner respectfully disagrees, as Parry teaches in column 4, lines 10-14, and in FIG. 3, Sheet 3 of 7, the switch (item 12) interconnects the rings (items 11), and, as a result, provides connections between the multiplexers of the different rings.

II. Arguments for rejections made under ***35 USC § 103.***

Applicant's arguments with respect to Claims 2, 5-14, 16-21, 23-29 and 31-26 have been considered but are moot in view of the new ground(s) of rejection.

Amended independent Claims 1, 3, 4, 15, 22 and 30 are rejected, as discussed above, and dependent Claims 2, 5-14, 16-21, 23-29 and 31-26 are rejected, as discussed above.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Smith whose telephone number is 571-270-1826. The examiner can normally be reached on Monday through Friday, 9:30 AM to 7:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Smith
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HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600